

2013 UDOT RESEARCH PROBLEM STATEMENT

*** Problem statement deadline is March 25, 2013. Submit statements to Steve Bagley at sbagley@utah.gov ***

Problem Title: Evaluation of Construction Documentation Procedures

No. (office use): UT-13.05.04

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UDOT Champion (suggested): Larry Myers, Other?

Select a Subject Area

☐ Materials/Pavements

☐ Maintenance

☐ Traffic Mgmt/Safety

☐ Geotechnical

☒ Preconstruction

☐ Planning/Asset Mgmt

☐ Transportation Innovation

1. Describe the problem to be addressed.

A fairly high profile UDOT construction project was completed a number of years ago, but recent legal pursuits have brought the design and construction activities associated with this project back to life. Although “hindsight is said to be 20-20,” one of the key features One of the key observations in readings depositional statements from project personnel is that there seemed to be a lack of training associated with construction documentation and whether or not adequate documentation was performed. For certain projects with a high degree of associated risk, additional documentation beyond the norm may even be warranted. An associated dilemma with construction documentation is staying apprised of technology advancements and utilizing the ever increasing technology tools for adequate documentation. This research proposes aims to evaluate the current practices associated with construction documentation, training procedures and techniques utilized, and then perform project specific analysis to evaluate the level of construction documentation taking place.

2. Describe why this research is important and how it is unique.

Construction documentation is important for a number of reasons, including verification of work performed, quantities utilized, means and methods associated with construction, and in general making an accurate record of how construction occurred. Further, construction documentation is highly invaluable when litigation on a construction project occurs. This research will evaluate the use of modern tools in construction documentation with appropriate documentation practices. A third-party review in determining how well documentation procedures are currently be followed will also allow the department to better understand the adequacy and effectiveness of their current procedures and practices.

3. List the research objective(s) to be accomplished:

1. Identify and evaluate documentation techniques used by other state highway agencies
2. Determine effectiveness of UDOT practices in procedure, training, and actual construction documentation
3. Develop hierarchy of documentation procedures based on associated project risk

4. List the major tasks to accomplish the research objective(s):

1. Perform general literature review of construction documentation techniques utilized in heavy/civil/highway construction
2. Determine documentation practices followed by other state highway agencies
3. Evaluate current UDOT construction documentation training procedures
4. Analyze select UDOT projects to evaluate documentation taken
5. Perform survey of current construction projects and evaluate construction documentation
6. Compare results of actual documentation with corresponding UDOT standards
7. Make recommendations as appropriate

5. List the deliverable(s) to come to UDOT from this research study:

1. Project report.

6. Describe how the results of this study will be implemented at UDOT.

The UDOT central construction team and associated region construction teams are the primary users of this research. These results can benefit general construction practices, support UDOT's role in providing effective and efficient construction projects, and potentially strengthen the department's involvement in higher risk projects. Ultimately, these results can provide a level of measure of current documentation practices and improve the construction process.

7. Estimated cost - Total: \$15,000

UDOT Share: \$15K **Other/Matching Funds:** \$student labor match

8. Outline the proposed schedule for this study, including estimated start date, duration, and major event dates.

It is anticipated that this project will take one calendar year to complete.

